UNITED STATES DISTRICT COURT
WESTERN DISTRICT OF TEXAS
WACO DIVISION

PROXENSE, LLC Plaintiff, v. TARGET CORPORATION Defendant.	Civil Action No.: 6:20-cv-879 (ADA) **JURY TRIAL DEMANDED**

FIRST AMENDED COMPLAINT FOR PATENT INFRINGEMENT

Plaintiff, Proxense, LLC brings this action for patent infringement against Target Corporation (hereafter "Target" or "Defendant"). Plaintiff is filing this First Amended Complaint less than 21 days after Defendant filed its Motion to Dismiss the Complaint. Plaintiff has a right to file its First Amended Complaint pursuant to Fed. R. Civ. P. 15 (a)(1)(B). Plaintiff, for its First Amended Complaint, hereby alleges as follows:

THE PARTIES

1. Plaintiff Proxense, LLC is a Delaware company with its principal place of business at 689 NW Stonepine Drive, Bend, Oregon 97703.

2. Upon information and belief, Target is a corporation duly organized and existing under the laws of the State of Minnesota and having its principal place of business at 1000 Nicollet Mall, Minneapolis, Minnesota, 55403. For purposes of diversity, Target is a citizen of the State of Minnesota.

JURISDICTION

3. This is a civil action for patent infringement under the patent laws of the United States, 35 U.S.C. § 271, *et seq.* This Court has subject matter jurisdiction under 28 U.S.C. §§ 1331 and 1338(a).

4. This Court has general personal jurisdiction over Target because Target is engaged in substantial and not isolated activity at its regular and established places of business within this judicial district.

5. Venue is proper in this judicial district pursuant to 28 U.S.C. §§ 1391(b)-(c) and 1400(b) because Target maintains a regular and established place of business, and has committed acts of patent infringement, within this judicial district.

FACTUAL BACKGROUND

6. Proxense was founded in 2001 as a limited venture with a focus on designing core technology. The company was formally incorporated in 2005 as an LLC. Since that time Proxense developed sophisticated, proprietary, proximity-based detection, authentication, and automation technology, built on the concept of utilizing small electronic sensors (RDCs) capable of wirelessly detecting, authenticating, and communicating with personal digital devices (PDKs). From 2005-2012, Proxense developed core technology and commercial products, employing over thirty engineers and investing many millions of dollars in product development and other research and development efforts. One of the technology's foundational capabilities was to enable PDKs to run for as long as two years on tiny batteries. Significant financial and engineering resources were deployed to make this possible. The resulting developments became primary differentiators of Proxense's product line, and significant elements on which its business was built.

7. Simultaneous to the core technology development, Proxense also designed and implemented various services/applications utilizing the technology's superb power efficiencies, and advanced wireless detection, authentication and secure communications functionalities. One such application was a wireless system designed to enhance and grow user / location interaction, via secure, automated, advertising services, in retail, medical, and other such environments. Throughout this process, the company actively prosecuted patents on both its advanced technology, and related services/applications.

8. Proxense also holds over 55 patents on related technology, including digital content distribution, digital rights management, personal authentication, biometric data management and mobile payments. Proxense continues to prosecute new patents on its proprietary technology.

THE PATENT-IN-SUIT

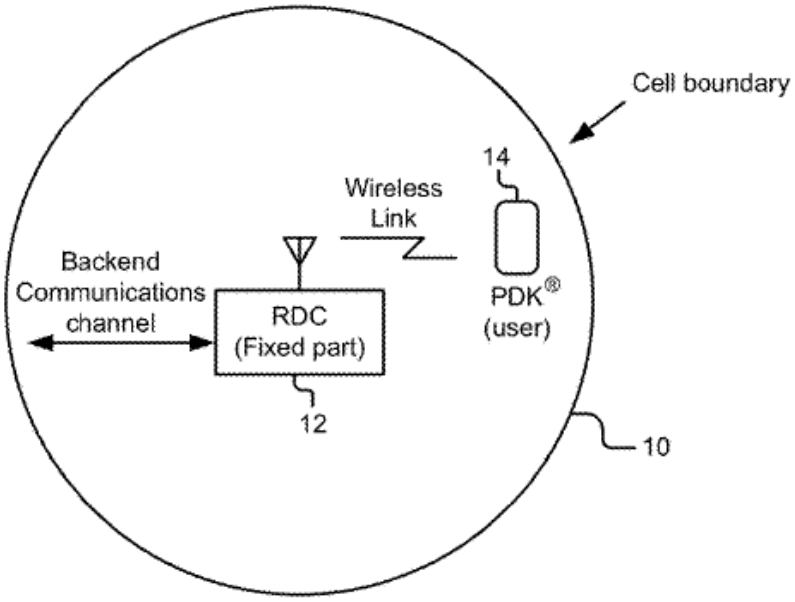
9. On October 22, 2019, the PTO issued United States Patent No. 10,455,533 ("the '533 patent"), titled WIRELESS NETWORK SYNCHRONIZATION OF CELLS AND CLIENT DEVICES ON A NETWORK. The '533 patent is presumed valid and enforceable. See 35 U.S.C. § 282. A copy of the '533 patent is attached as Exhibit A.

10. Proxense is the owner and assignee of all rights, title and interest in and to the '533 patent, and holds all substantial rights therein, including the rights to grant licenses, to exclude others, and to enforce and recover past damages for infringement of that patent.

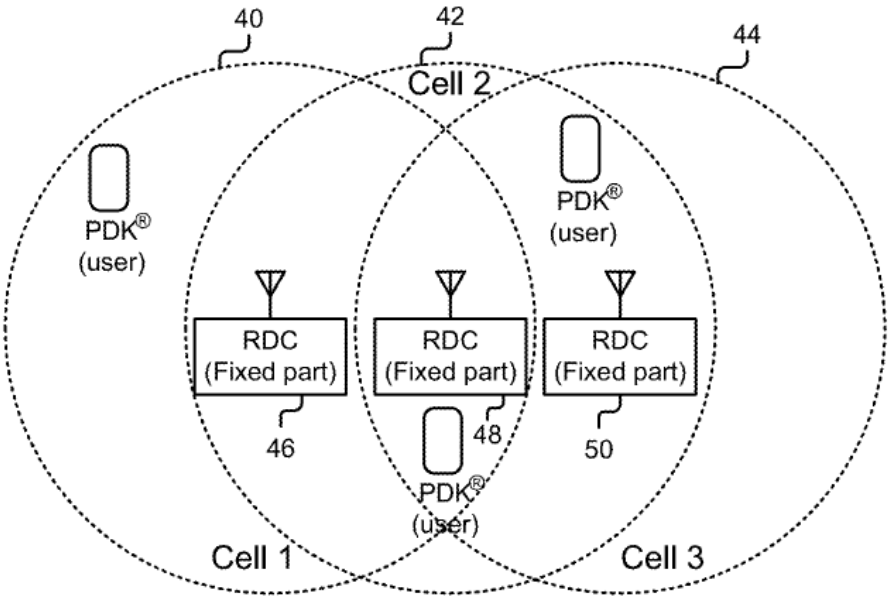
11. The '533 patent discloses important aspects of the Proxense technology, which is directed to, among other environments and applications, the use of a reader decoder circuit ("RDC"), or multiple RDCs, to interact with a personal digital key ("PDK") carried by a user of the system. A PDK "is a portable wireless device that may be conveniently carried by an

individual to facilitate wireless tracking and/or allow the individual to wirelessly access various applications, assets, and/or services." The user's PDK may be any wireless device that may be worn or carried by a user, including a cellular phone. See '533 patent; col. 6, lns. 30-47. Upon information and belief, Target supplies or supplied an application which it directed users to download and enable on their PDKs to facilitate reception and processing of signals received from RDCs located within its retail premises.

12. The RDC emits a wireless signal, or "beacon," that is used to identify and initiate contact with PDKs that come into the wireless coverage boundary of the RDC. "When an individual carrying the PDK 14 comes into proximity of the RDC 12 by entering a coverage area of the RDC 12, a wireless communications session is initiated between the PDK 14 and the RDC 12." Id. at col. 7, lns. 23-27. An example of a user's PDK entering the coverage area of a single RDC 12 and establishing a wireless link with the RDC is shown in Figure 1 of the '533 patent, and is reproduced below.



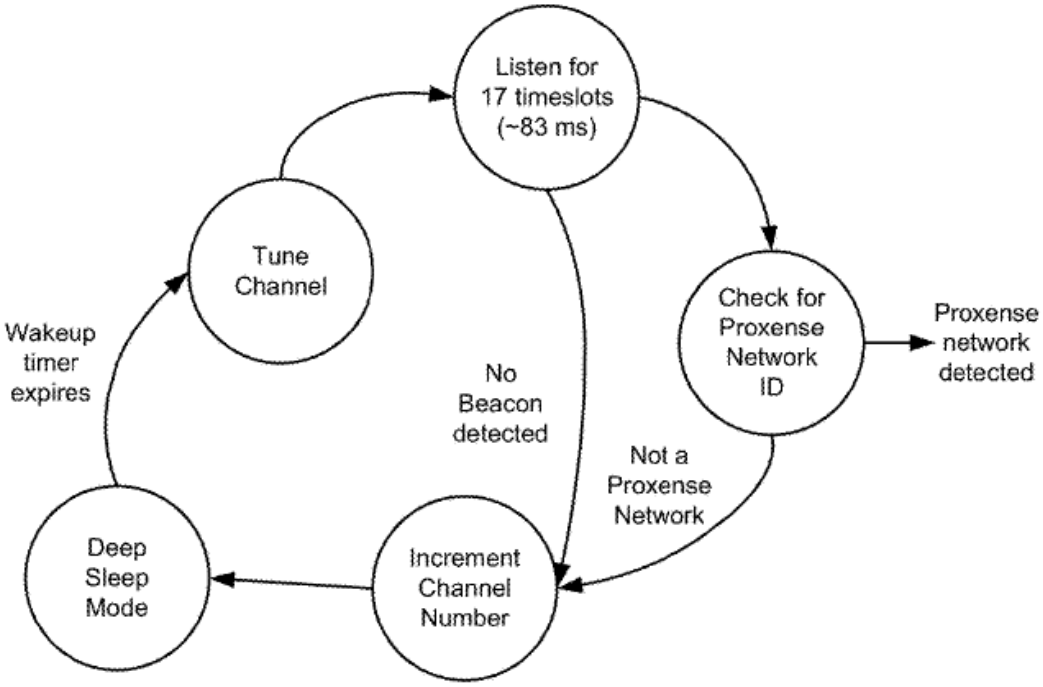
13. The Proxense patented technology may also be used with multiple RDC beacon units providing overlapping coverage areas to track individual user PDKs, as shown below in Figure 3 of the '533 patent.



14. In the retail environment, the Proxense patented technology enables in-store beacons to identify and track customers in the store by communicating with an application on the customer's cellular phone, and also provide information to the customer such as a store map, coupons and store-specific promotions.

15. PDKs are normally in a battery save mode, or sleep mode, and periodically wake up, or transition to active mode, to look for RDCs. More specifically, PDKs employ a wakeup timer set to periodically prompt the PDK to wake up its receiver, tune it to a particular channel, and monitor the channel for an RDC beacon. See '533 patent; col. 26, ln. 65 – col. 27, ln. 7. If no beacon is detected within a given time period, the channel number is incremented (i.e., the PDK selects the next channel to monitor), the PDK resets its wakeup timer, and returns to sleep mode. Id. at col. 27, lns. 8-13. The above process then repeats when the wakeup timer once

again expires, and prompts the PDK to wake up and monitor the next channel. Conversely, if a beacon is detected, the PDK retrieves the network ID of the RDC, and attempts to establish a communications link with the RDC. Id. at col. 27, lns. 13-15. This process is illustrated in FIG. 26, below.



16. Once linked, the PDK and RDC may transmit information to each other, as well as communicate with a central server. As a nonlimiting example, the PDK may transmit its ID to the RDC, which then may forward this information to a server for logging. See FIG. 34.

TARGET'S USE OF PROXENSE PATENTED TECHNOLOGY

17. Target has more than 1,800 stores in the United States operating under the Target brand name. Target is a prolific user of Proxense's patented technology in all of its Target stores, including Target stores within this district. In the third quarter of 2019, Target reported $18.7 billion dollars in revenue, an increase of 4.7% from third quarter of 2018. Target also reported

operating income of more than $1 billion dollars, an increase of 22.3% from third quarter of 2018.

18. Target is the developer of the Target mobile phone application (a/k/a the Target "App") and makes it available for download, including via the App Store for iOS devices and the Google Play Store for Android devices. The App Store for iOS devices lists Target as the developer and seller of the Target App, and also indicates the copyright as "2019 Target Corporation." The Google Play store lists Target as the developer contact for the Target App and also indicates that the Target App is "offered by" Target Corporation.

19. The Target App is an important part of Target's marketing and sales efforts. The Target App has been downloaded more than ten million times from the Google Play store and is listed in the top 20 shopping applications on the App store for iOS devices. Target heavily promotes the features of the Target App that integrate with its physical stores, and actively encourages its customers and potential customers to download the Target App.

20. The Target App, by design, interacts with Target Bluetooth beacons in Target's stores in order to determine a Target customer's in-store location. In 2015, Target began replacing the light fixtures in its stores with light-emitting diode (LED) fixtures (also known as luminaires) provided by Acuity Brands. These new light fixtures include not only LED lights, but also Bluetooth beacons (i.e., Target Bluetooth beacons) that are powered by the fixture. Target configures the Target Bluetooth beacons and controls their operation, including maintaining servers that can be accessed by the Target App to provide products, services and offers to customers that install the Target App while those customers are in proximity to the Target Bluetooth beacons.

21. As early as September 2017, Target announced its plans to upgrade its Target App to provide indoor proximity functionality for the Target customer:

> A few weeks ago, we shared some exciting news about Target's popular Cartwheel savings program becoming part of the Target mobile app. It's another example of Target blending digital with physical stores to make shopping easier, more convenient and more fun.
>
> ***Now, Target is further upping its app game with beacon and Bluetooth technology that shows your location on the app's map as you move throughout the store. The technology — think of it as GPS for your shopping cart — will be live in about half of Target's stores in time for the holidays. And as guests use the in-store location technology to shop, the app will also display nearby Cartwheel deals.***
>
> "Now you'll never have to miss out on an opportunity to save," says Target's chief information and digital officer Mike McNamara. "This promises to make it easier than ever to find what you're looking for, so you can fill up your cart and get on your way."

(https://corporate.target.com/article/2017/09/target-app-mike-mcnamara) (emphasis added).

22. Currently, all (or substantially all) Target stores, including those located in Texas and in this judicial district, are equipped with Target Bluetooth beacons that cover essentially all the areas in which Target customers shop.

23. Target began testing its Target Circle loyalty program in 2017 at a limited number of stores, including Target stores in Dallas-Fort Worth, and later, Charlotte, Denver, Indianapolis, Kansas City, and Phoenix.

24. In October 2019, Target launched its Target Circle loyalty program nationwide as a rebranded version of Cartwheel. Target, consistent with its September 2017 announcement,

used the Target App to offer nearby Target Circle offers to Target customers at its stores. The Target App receives a beacon signal from a Target Bluetooth beacon. This beacon automatically alerts the Target customer to information related in proximity to that Target Bluetooth beacon. The App can also "wayfind" by using blue-dot mapping to lead the customer to the product.

25. On Target's November 20, 2019 third quarter earnings conference call, Target reported that:

> And of course, the fourth quarter will benefit from Target Circle, our new loyalty program that launched nationwide last month. Even though the program is brand new, Target Circle already has more than 35 million members, making it America's fastest growing loyalty program. During an 18-month test period, guests enrolled in Target Circle save more, shop more frequently and spend 2% to 5% more than guests who weren't in the program.

(Target Corp Q3 2019 Earnings Call (Nov. 20, 2019), prepared remarks of Brian Cornwell, Board Chairman and CEO).

26. Target has heavily promoted the nationwide launch of Target Circle. Target, in fact, specifically reported increased marketing expenses due to the October 2019 launch of Target Circle on its 3Q 2019 earnings call.

27. Target instructs and encourages Target customers to install the Target App on their mobile devices and rewards them for installing the Target App by, among other things, providing in-store services and information.

28. Target conditions receipt of benefits that are available via the Target App on Target customers downloading, installing, and using the Target App and associated software on their devices (e.g., phone or tablets). For example, Target customers must download and install the

Target App in order to receive map-based information about the in-store location of products offered by Target. As another example, Target customers must download and install the Target App in order to receive information regarding certain special offers (e.g., Target Circle offers) via the Target App. Exemplary features of the Target App are described further below.

29. Target configures the Target App with menu structures and buttons that establish how a Target customer uses the Target App. As one example, a "Cartwheel Offers Near You" (now "Target Circle Near You") feature becomes available to the Target customer via the Target App when the Target customer is detected as being at a Target store.

30. As another example, for checkout and payment features of the Target App, Target establishes the manner and timing of the use of those features. Target customers must log into the Target App in order to use the "Wallet" feature, in which Target Circle Offers may be used when a product is purchased, and to use in-store payment features. The Target App Wallet feature allows Target customers to display a bar code that is scanned by a Target employee for in-store check-out. Target customers must associate a RedCard account or other payment method with the barcode in order to pay via the barcode at the Target store during checkout. Target establishes the manner and timing in which these features may be used, for example, when during in-store check-out that barcode scanning is available.

31. Target also conditions the benefit of using Target Circle Offers via the Target App on the Target customer's use of the Target App checkout feature (which includes, for in-store checkout, display of a barcode via the Target App). Target customers must use the Target App checkout feature in the way designed by Target in order to pay via the Target App. Target customers may not leave a Target store with goods unless they purchase the goods, and Target

customers must use one of the processes that Target provides for checkout and purchase of goods sold in Target stores.

32. Once a Target customer opens the Target App on their mobile device, the Target App automatically interacts with the Target Bluetooth beacons throughout the Target Store.

33. The Target Bluetooth beacons that are installed in the light fixtures in Target's stores transmit beacon identifiers via Bluetooth protocol and interact with devices (for example, Target customers' mobile devices) on which the Target App is installed in an infringing manner.

34. Once a Target customer has installed the Target App (which includes associated software) and activates Bluetooth on their device, the Target customer's device interacts with the Target Bluetooth beacons without further action by the Target customer.

35. Target also maintains, owns, operates or controls one or more servers that Target configures to interact with devices on which the Target App is installed (the "Target Server(s)"). Alternatively, on information and belief, Target is responsible for the operation and actions of the Target Server(s) because Target directs or controls their operation (for example, by employing an agent to configure and operate the Target Server(s) on Target's behalf). Alternatively, or additionally, Target forms a joint enterprise with an entity that operates the Target servers, including, but not limited to, an entity associated with Acuity Brands. For example, software designed and distributed by Target causes devices on which the Target App has been installed to communicate with Server(s) operated by Acuity Brands (or its agent) on behalf of Target, and Target is responsible for the operation and actions of these servers. "Target Server(s)" include these server(s) that are operated by Acuity Brands or its agent on behalf of Target.

36. Software (including libraries) associated with the Target App is triggered by receipt of beacon identifier information received from Target Bluetooth beacons to cause the

device on which the Target App is installed to communicate with the Target Server(s). As a result of receiving signals from Target Bluetooth beacons, devices on which the Target App is installed communicate with Target Server(s)., e.g., servers operated by Acuity Brands on behalf of Target. In response, Target Server(s) provide information to the devices on which the Target App is installed.

37. As a result of the interaction (in accordance with Target's design and implementation) among the Target Bluetooth beacons, Target Server(s), and devices on which the Target App is installed, Target Servers and Target customer devices are provided with a real-time in-store location of the Target customer's device. For example, at least when a Target customer brings their device with Bluetooth services enabled and the Target App installed into a Target store, the device provides Target Beacon identifier information to Target Server(s). As a result, the device is provided with information related to the Target store, including location information and, on information and belief, a listing of beacon identifiers for the Target Bluetooth beacons for that Target store.

38. To the extent Target's Server(s) are operated by an entity other than Target, on information and belief, Target forms a joint enterprise with said entity. In this case, Target and the entity (e.g., Acuity Brands or a related entity and/or other Bluetooth beacon/server providers) have an agreement, express or implied, regarding the purchase, installation, configuration, and operation of a system that includes Target servers, Target Bluetooth beacons (e.g., provided by Acuity Brands to Target) and devices on which the Target App and related software (e.g., libraries) is installed. Further, Target and the entity share a common purpose of operating this system and its components in order to, among other things: provide Target customers with

information related to Target and Target stores; gather information regarding Target customer shopping patterns; and increase the sales and profits of Target and its vendor(s) and partners.

39. Bluetooth devices, such as Mobile devices on which the Target App is installed and Target Bluetooth beacons, connect by scanning successive advertising and/or data channels. The Target App is configured to interact with devices according to the various Bluetooth Low Energy ("BLE") protocols. In particular, Bluetooth devices scan successive different advertising channels in successive scan windows. See Bluetooth Specification Version 5.0, Vol. 6, Section 4.4.3.

40. To save power and extend battery life, Bluetooth beacons and mobile devices enter a sleep mode between successive scans, switching back to an active mode to conduct each scan. See, e.g., Bluetooth Specification Version 5.0, Vol. 3, Section 8.6.9.1; Vol. 1, Section 2.2.5.1.

41. Bluetooth beacons and mobile devices conduct successive scans at scheduled connection events, necessitating use of a timer set to notify the beacons or devices of the occurrence of these events. See Bluetooth Specification Version 5.0, Vol. 6, Section 4.4.3.

COUNT I

(Infringement of U.S. Patent No. 10,455,533, Claims 1 and 7-9 – System Claims)

42. Paragraphs 1-47 are reincorporated by reference as if fully set forth herein.

43. On information and belief, Target utilizes beacon systems in its retail stores that contributorily infringe, and induce infringement of, claims of the '533 patent. Based on industry reports, Target deployed beacon systems in Target retail stores that provide options to in-store shoppers and provide shopping suggestions based on the individual user's personal interests.

44. On information and belief, Target-utilized beacon technology uses a location of a customer in the store to direct information to that user. See for example the information at: https://blog.hubspot.com/marketing/beacon-technology; https://techcrunch.com/2017/09/20/target-rolls-out-bluetooth-beacon-technology-in-stores-to-power-new-indoor-maps-in-its-app/; https://www.nytimes.com/interactive/2019/06/14/opinion/bluetooth-wireless-tracking-privacy.html.

45. Target customers, using the Target App on their Bluetooth enabled mobile devices (such as mobile phones), directly infringe claims 1 and 7-9 of the '533 patent. As a non-limiting example, Target customers perform or cause to be performed all elements of the system of claim 1 when using the Target App in a Target store. The Target customer directly benefits from interaction with all elements of the claimed system, including by receiving deals, special offers, and the ability to track their location within a particular Target store. Target customers achieve these benefits by receiving the beacon from a known location within the store according to the BLE capabilities on his or her mobile device, and by sending information from the beacon to a remote server maintained by Target as described above. Target customers further benefit from the claimed sleep cycle and timers by extended battery life of their mobile device(s). Thus, the Target customer places the claimed system as a whole into service.

46. Target has had knowledge of the infringing nature of its activities, or at least a willful blindness regarding the infringing nature of its activities, with respect to the '533 Patent since at least the date of the filing of this complaint.

47. Target also had knowledge of Proxense's patent portfolio, including the applications that led to the '533 patent and the '533 patent itself, through communications

between counsel for Proxense and counsel for Target in connection with licensing discussions concerning other Proxense patents. These discussions took place in 2019.

48. The Target App is specifically designed to interact with Target customer devices according to applicable BLE standards. Target intends for Target customers to use its Target App and in store beacons in a manner that infringes the asserted claims of the '533 patent, and the Target App is specifically designed to operate in a manner that infringes those claims. The Target App, and Target's network of in-store beacons throughout its stores, are specifically designed to operate automatically once the Target App is installed on the customer's mobile device. Target encourages its customers to install the Target App on their mobile devices, encourages use of the Target App and the in-store beacons in a manner that infringes the asserted claims of the '533 patent, and offers Target customers benefits for doing so.

49. The Target App, and network of in-store beacons that interact with the BLE capabilities of Target customer devices, have no substantial non-infringing uses. The Target beacons are transceivers that transmit beacons containing source-identifying information in a format that is recognized by the BLE capabilities of Target customer devices. The Target App uses that beacon signal, once detected, to send information to servers maintained and configured by Target to receive data from Target customer devices when those devices are near the source of the beacon.

50. Target has therefore infringed and is liable to Proxense for contributorily infringing, or inducing infringement of, claims 1, and 7-9 of the '533 Patent pursuant to 35 U.S.C. § 271(a).

51. As a result of Target's infringement of the '533 Patent, Proxense has suffered monetary damages, and seeks recovery in an amount adequate to compensate Proxense for

Target's infringement, but in no event less than a reasonable royalty for the use made of the invention by Target together with interest and costs as fixed by the Court.

COUNT II

(Infringement of U.S. Patent No. 10,455,533, Claims 11 and 17-19 – Method Claims)

58. Paragraphs 1-57 are reincorporated by reference as if fully set forth herein.

59. Target customers using the Target App on their Bluetooth enabled mobile devices (such as mobile phones) directly infringe claims 11 and 17-19 of the '533 patent. All elements of these claims are carried out on the Target customer's device while using the Target App. The wireless transceiver of the Target customer's mobile phone switches from a sleep mode to an active mode as claimed, and monitors for a beacon in BLE standard manner (See ¶¶ 21 and 46 above). When in proximity to a Target beacon, the Target customer (through the Target App) sends data from his or her device to a Target server.

60. Target has had knowledge of the infringing nature of its activities, or at least a willful blindness regarding the infringing nature of its activities, with respect to the '533 Patent since at least the date of the filing of this complaint.

61. Target also had knowledge of Proxense's patent portfolio, including the applications that led to the '533 patent and the '533 patent itself, through communications between counsel for Proxense and counsel for Target in connection with licensing discussions concerning other Proxense patents. These discussions took place in 2019.

62. The Target App is specifically designed to interact with Target customers according to applicable BLE standards. Target intends for its Target customers to use its Target App and in store beacons in a manner that infringes the asserted claims of the '533 patent, and the Target App is specifically designed to operate in a manner that infringes those claims. The Target

App, and the network of in-store beacons throughout Target's stores, are specifically designed to operate automatically once the Target App is installed on Target customer devices. Target encourages Target customers to install the Target App on their mobile devices, encourages use of the Target App and the in-store beacons in a manner that infringes the asserted claims of the '533 patent, and offers customers benefits for doing so.

63. The Target App, and network of in-store beacons that interact with the BLE capabilities of a Target customer device, have no substantial non-infringing uses. The Target beacons are transceivers that transmit beacons containing source-identifying information in a format that is recognized by the BLE capabilities of the customer's mobile device. The Target App uses that beacon signal, once detected, to send information to servers maintained and configured by Target to receive data from Target customer devices when the devices are near the source of the beacon.

64. Target has therefore infringed and is liable to Proxense for contributorily infringing, or inducing infringement of, claims 1, and 7-9 of the '533 Patent pursuant to 35 U.S.C. § 271(a).

65. As a result of Target's infringement of the '533 Patent, Proxense has suffered monetary damages, and seeks recovery in an amount adequate to compensate Proxense for Target's infringement, but in no event less than a reasonable royalty for the use made of the invention by Target together with interest and costs as fixed by the Court.

PRAYER FOR RELIEF

Plaintiff requests that the Court enter judgment against Target as follows:

(A) finding that Target has infringed one or more claims of each of the above patents-in-suit, literally and/or under the doctrine of equivalents;

(B) awarding damages sufficient to compensate Plaintiff for Target's infringement under 35 U.S.C. § 284 including an accounting of all infringement and/or damages not presented at trial;

(C) finding this case exceptional under 35 U.S.C. § 285 and awarding Plaintiff reasonable attorneys' fees;

(D) awarding Plaintiff costs and expenses incurred in this action;

(E) awarding Plaintiff prejudgment and post-judgment interest; and

(F) granting Plaintiff such further relief as the Court deems just and appropriate.

DEMAND FOR JURY TRIAL

Plaintiff demands trial by jury of all claims so triable under Federal Rule of Civil Procedure 38.

Date: December 14, 2020

Respectfully submitted,

/s/ Robert Christopher Bunt
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COUNSEL for PLAINTIFF

CERTIFICATE OF SERVICE

I hereby certify that all counsel of record, who are deemed to have consented to electronic service are being served this 14th day of December, 2020, with a copy of this document via the Court's CM/ECF system.

/s/ Robert Christopher Bunt
ROBERT CHRISTOPHER BUNT